Fully recognising the beneficial influence of conium upon nutrition and pain, he attributed these results to its power of allaying the nervous irritation, to which the continuance, at least, of the morbid process, might fairly be attributable. Its anodyne power in cancer of the stomach or bowel he considered to be the result of muscular relaxation in the diseased parts, rather than to any direct influence upon the sensory nerves—the conium being to the muscular parts involved in the cancerous disease, what the knife is to the sphincter muscle of the bowel when in a condition of irritable ulceration.

With regard to the elimination of conia, he had failed to observe it in the pulmonary and cutaneous exhalations, or in the urine. The latter excretion was searched most carefully and by different processes, but no trace of conia could be obtained. The urinary secretion remained unchanged during the action of the medicine, as shewn by the analysis of the urine of a male patient, aged 51, secreted during the half hour immediately preceding a dose of one ounce of the succus conii of the *British Pharmacopœia* (Urine A), and that which was secreted during the next two hours and a quarter, the period occupied by the full operation of the medicine and its decline, so as to leave the patient in his usual condition (Urine B). Both specimens of urine had precisely the same physical characters—a full sherry colour, clear, naturally acid, and a specific gravity of 1023·2.

1000 grain measures of the Urine	1000 grain measures of the Urine
A contained	B contained
Chlorine 5·5 grs.	Chlorine 5·66 grs.
Urea 16·0 grs.	Urea 16·6 grs.
Phosphates & sulphates 10·2 grs.	Phosphates & sulphates 10·5 grs.
Uric acid, normal amount.	Uric acid, normal amount.

In some cases, the solid constituents were more abundant in the urine passed before the action of medicine; in others, more abundant in that passed after the operation of the drug; the variations in all cases having reference to the time of ingestion of the last meal, and being altogether independent of the action of the conium.

In treating of the second part of his subject, viz., the therapeutical uses of conium, the lecturer brought forward several interesting cases of nervous disease, and showed the power which conium possesses in controlling and subduing the convulsive diseases of children in particular. He advocated its use in chorea, cramp, tetanus, and in some forms of epilepsy. In pertussis, laryngismus stridulus, and other spasmodic affections due to derangement of the vagus nerve, he stated that his experience of conium had been exceedingly satisfactory. In all cases of irritability of the spinal cord, and especially in cases of undue excitement of the sexual organs, the beneficial action of conium was very marked. I cannot too strongly insist, he observed, on one point, viz., that a dose of hemlock which falls far short of producing the peculiar physiological effects of the plant, is of no more use in the treatment of the diseases to which it is adapted, than an ordinary dose of quinine would be in the treatment of ague. Having satisfied myself, by careful observation of the patient, as to the quantity required to produce the earliest indications of hemlock action, viz., slight and transient giddiness with a little weakness of the knees, I prescribe a repetition of this dose every other, or every day, or even twice a day.

In tetanus it will be necessary to administer from three drachms to one ounce of the succus conii, and repeat it at intervals of two or three hours. If there be any difficulty in giving it by mouth, it may be administered by rectum.

Our ignorance of the therapeutical use of conium is declared in the preparations which have been, and still are, furnished for our use, and in the doses in which these are recommended. The extract of conium, when most carefully prepared, does not contain more than one per centum of conia; and of this preparation five grains would generally be insufficient for a child two years old, while not less than twenty or thirty grains would be required to produce in a slight degree the physiological effects of conium in an adult of moderate activity. The dried leaf and the preparations derived therefrom are absolutely inert, and the tincture of the fruit lately introduced into the *Pharmacopœia* is equally useless. If two ounces of either the tinctura conii *P.L.* or of the tinctura conii fructus be taken, absolutely no conium effects will result. The only reliable preparation is the succus conii. From two drachms to one ounce of it will, according to the motor activity of the individual, invariably produce the full physiological action of hemlock, and the beneficial effects which may be expected to follow. I usually give a child, six months old, twenty or thirty drops of the succus conii; a child over two years old, one drachm; one ten years old, from one to two drachms. For a woman, I prescribe two or three drachms; and for a man, four or five drachms. From these initial doses I ascend until the peculiar effect of hemlock is declared. Having once attained this, it is rarely necessary to increase the dose, for the system rarely manifests any considerable toleration of hemlock, and a dose which produces a given effect will,

after six months' continuance of the medicine, usually influence the patient to the same extent at the end of that time. The succus is not liable to any appreciable variation, and it will keep unimpaired for years. But, for a complete examination of the medicinal value of the preparation of hemlock, I must beg to refer you to some papers which I contributed last year to the *Pharmaceutical Journal*.

FURTHER OBSERVATIONS ON THE CÆSAREAN SECTION.

By THOMAS RADFORD, M.D., F.R.C.P. Ed.,
Honorary Consulting-Physician to St. Mary's Hospital, Manchester, etc.

IN the present communication, it has been my object to register all cases of Cæsarean section, published and unpublished, which (as far as I have been able) have occurred in Great Britain and Ireland since the publication of my former observations (*BRITISH MEDICAL JOURNAL*, 1865, vol. i, p. 211), to which I beg to refer my readers, as it is quite impossible, and indeed unnecessary to enter, at the present time, upon all those subjects which are legitimately concerned in the consideration of this operation, as one of election, or even as one of necessity. The concentration of, or reference to, all cases of this important operation, especially as it is not universally adopted, or even recognised, is most valuable to those members of the profession who are desirous to analyse and compute the risk and dangers of it, in comparison with the results of those alternative operations which are recommended to supersede its performance, and thereby to satisfy themselves whether the unfortunate results of this (the Cæsarean section) are really attributable to it, or to other factors of mischief not necessarily belonging to it.

The annexed tables are very limited when compared with those from which they have been extracted, and which embrace the following points; the number and kind of previous labours; the mode of delivery; the tangible state of the os uteri; the situation of the placenta; the line of the incision; the previous and present constitutional state; the administration of chloroform; the application of ether-spray; the reputed cause of death; and the results of the *post mortem* examination. I have enumerated the above points, which head the columns in the said tables, in order that the reader may understand upon what plan I have based my deductions.

I take this opportunity of returning my sincere thanks to Dr. Frederic Bird and to Dr. J. Braxton Hicks, for their great kindness and liberality in furnishing me notes of three unpublished cases of Cæsarean section; and also to Dr. Greenhalgh, Dr. Eastlake, Dr. Pirrie, and Dr. John Taylor, for having supplied me with additional and important particulars relative to their published cases.

There are nineteen cases tabulated, of which number seventeen have occurred in England, one in Scotland, and one in Ireland. I may again remark, that it is a remarkable fact that there is no case recorded from Wales. The causes which have rendered the operation necessary in these nineteen cases are as follows. In two the pelvis was distorted from mollities ossium; in four it was caused by rickets; in one the pelvic bones were undeveloped, and the apertures diminished—characteristically partaking of the oblique shape described by Naegelé, only differing in having both sides, although not equally, affected; in four cases the obstacle was caused by pelvic distortion, but the character of the deformity is not mentioned; in one a large exostosis, springing from the upper portion of the sacrum, caused the difficulty; in one it was produced by a large fibrous tumour impacted in, and blocking up, the pelvic cavity; in four cases carcinomatous degeneration of the cervix and os uteri, and in one case of the rectum, rendered the operation necessary; in one case the operation was performed on account of a large hydatid cyst, which had passed from the abdomen into the pelvis, and was placed before, and compressed by, the advancing head of the infant; it was so hard as to be mistaken for a bony growth. Although the diminution of the pelvic apertures has been deemed sufficient in these cases to prevent the delivery *per vias naturales*, yet it must ever be borne in mind that the cause of mischief in most of them is not stationary, but progressive, so that ultimately the pelvis might be as nearly as possible completely blocked up. In one case (79) the error of diagnosis which was made, was proved by the *post mortem* examination. It might have been obviated by an earlier examination, before the cyst had been so firmly compressed. Puncture of it at an early stage of labour would doubtless have removed the cause of obstruction. In some of the cases the os uteri could not be felt; whilst in others it could only

be reached with great difficulty. There is ample evidence in all (but one) of these cases to prove the necessity of the Cæsarean section. The mechanical obstruction which existed is sufficient to demand its performance; but the unsuccessful attempts made in some of them, by some of our most experienced obstetricians, to deliver by craniotomy, embryotomy, etc., afford further corroborative evidence that this operation cannot be eliminated, but it must stand at least as one of necessity, which neither craniotomy, cephalotripsy, the induction of premature labour, or of abortion, can supersede.

STATISTICS.—The results of the Cæsarean section in reference to the mothers are very unfavourable; of the 19 women whose cases are tabulated 15 died, or 78.94 per cent.; four, or 21.05 per cent., were saved. In one of these cases, the report extends only to 48 hours after the operation. Further information I have not received, although I sought for it. From the 19 women the same number of infants were extracted, of which number 13, or 72.22 per cent. were saved. Two of this number afterwards died,* one being very small and feeble; the other premature, being only six months and a-half. These two infants were the offspring of women suffering under cancerous degeneration of the cervix and os uteri. Of the entire number, five, or 26.31 per cent., were dead when extracted.

MATERNAL MORTALITY.—The maternal mortality is shown above to be very great; and it is of the highest importance to ascertain what has caused such a fatality. We find that the constitutional state of nearly all the women who underwent this operation was in a most unfavourable condition to bear it without great hazard; and in several of them the pelvic organs and tissues had suffered from pressure. Seven of these women laboured under progressive and incurable disease, with four of whom it was malignant, there being cancerous degeneration of the cervix and os uteri, and one of the rectum; one was nearly bed-ridden, and suffered from mollities ossium. Four women were rickety, and greatly exhausted; one of them was a dwarf, and had had craniotomy unsuccessfully performed after a very long labour. In one the infant presented footling, and, after fruitlessly drawing down the feet, breech, and arms, the head was perforated, and the cephalotribe unsuccessfully attempted to be used. The body was afterwards dragged away, leaving the head behind, which afterwards escaped into the abdomen through a rent of uterine tissue. One was greatly exhausted, and suffered from considerable pelvic mischief. Another suffered from great exhaustion, and had endured a long labour; the infant's arm presented; turning was attempted, and the blunt hook and cephalotribe were unsuccessfully used; the muscular tissue of the uterus was torn. Two of the women who died were not in a bad constitutional state. One of them had a large fibrous tumour, which blocked up the pelvis. In the other, pelvic deformity existed, and she had labour induced at eight months and a-half. In two cases we have no account.

EXHAUSTION.—Exhaustion is stated to be the only cause of death in eight cases; in one of which labour is stated to have existed some days—eight days after the rupture of the membranes. Several of the abdominal organs were diseased; there was also a large hydatid cyst, extending from the liver into the pelvis, which was the obstructive cause of labour. In one the membranes had ruptured ten days before, and active labour had existed several hours. Several of the abdominal organs were diseased, and the os and cervix uteri were affected with cancerous degeneration. One woman, who had not commenced labour, sank on the sixth day after the operation from the exhaustive influence of a large cancerous growth. One woman was four days in labour, and was in a bad state of health when it commenced. In one, the duration of labour was, as far as can be computed, from 70 to 80 hours; the membranes had ruptured 96 hours before the operation was performed, and several unsuccessful manual and instrumental attempts had been made to deliver the woman; rupture of the uterus had taken place. Another patient was only in labour 28 hours, or thereabout, after the discharge of the liquor amnii, but craniotomy had been unsuccessfully performed, and the infant's body had been forcibly dragged away, leaving the mutilated head *in utero*, which afterwards passed into the abdomen through a rent in this organ. One woman, a dwarf, is reported to have died exhausted, who was in labour 72 hours; her infant had been unsuccessfully craniotomised. The death of one woman is assigned to exhaustion; she was in labour only 12 hours, and delivery was obstructed by a large fibrous tumour. On an attentive consideration of the circumstances of the aforesaid cases, there exists abundant evidence in all (with the exception of the last case) of what were the real causes of the failure of the vital powers.

PERITONITIS.—Peritonitis is recorded as the cause of death in six cases. In one, the duration of labour was 66 hours; the woman was likewise in

a bad constitutional condition. In one, it was 112 hours. This woman was also in a bad state of health. In one case, the woman was in labour 48 hours; and at least 30 to 40 hours after the discharge of the liquor amnii. The cervix uteri was soft and dark coloured, and the os was patulous and nearly black, as if gangrenous. The internal surface of the uterus was darker and rougher than natural. In one case, labour had lasted 96 hours; and the woman was greatly exhausted at its commencement. In one case, it is stated the waters had been discharged 10 days before the operation; but active labour had only existed 3 or 4 hours. She had cancerous degeneration of the cervix uteri, and was completely anæmic from previous losses of blood, and there existed disease in the liver, spleen, and other organs. In one case there was "slight injection of the peritoneum." The operation was performed at 8½ months of pregnancy. Labour was induced by "secale." Long duration of labour stands prominently forward in nearly all those cases of Cæsarean section, in which death has been recorded as having been caused either by *exhaustion* or by *peritonitis*. Protraction in labour ought at all times to be considered as a factor of danger. The mischief inflicted varies in degree in different cases, according as there may exist different relative circumstances; but it is an indisputable fact, that danger nearly always increases in proportion to the duration of labour. There are doubtless other contingent conditions which aggravate the effects thus produced; such as the early evacuation of the liquor amnii; the kind and degree of the obstacle which impedes the progress of the infant through the pelvis; or a low constitutional and local state of vital power. In most of the aforesaid fatal cases, some, if not all, of these elements of mischief existed.

HÆMORRHAGE.—Hæmorrhage during labour is an accident which is generally attended with great peril to the mother, and claims the gravest consideration and attention of the obstetrician. Every case, however slight it may appear, claims his anxiety and care. There is, however, one consolation: he has the means, if he exercise judgment, to arrest the danger of some of the most appalling cases. But it may be reasonably supposed that hæmorrhage is a more serious factor of danger in Cæsarean cases than in labours in general. The sources whence blood is discharged, during and after the operation, are from the incised edges of the abdominal and uterine wounds; and when the placenta is located under the line of the incision, it may be cut, and the blood issues from its divided structure; or, if this organ be torn, it then flows from its disrupted tissue. So, also, if the placenta be detached from the uterus, when atonic, then blood is poured out from the sinuous openings. It is a remarkable fact, that there has been very little blood lost in the great majority of the (19) recorded cases of Cæsarean section. In eight of these cases the placenta adhered to the anterior part of the uterus; in four of which there was very little bleeding. The placenta was not cut during the operation, but it was very cautiously and only partially detached, so as just to admit the hand of the operator. But in the other four of these cases (placenta anteriorly placed), the bleeding which proceeded from the edges of the uterine wound was profuse; in two of them the placenta was cut into, and in the other two cases this organ was completely separated and removed by the operator before he passed his hand into the uterus to extract the infant. In eight of the entire number, the placenta was situated on the posterior part of the uterus; in two of the cases, there was a considerable loss of blood; in five, there was very little lost; and in one there was no bleeding. Chloroform was administered in ten cases; in five of which, there was only a little blood lost; in four, the bleeding was very great. Ether-spray was used in four cases, in which there was very little blood lost. The factors of hæmorrhage in Cæsarean cases are the same as those which operate in all kinds of labour, with an additional one, the incised edges of the abdominal and uterine wounds. Whatever diminishes the contractile power of the uterus, nearly always produces this accident. It has already been mentioned that there is no cause which is more influential in weakening the vital energy of the uterus, than protracted labour. We find that those who lost the most blood were in labour for a considerable length of time. One was from 70 to 80 hours; one 112 hours; one 66 hours; and in one the membranes had been ruptured ten days, and active labour had existed several hours. This woman suffered under cancerous degeneration of the cervix uteri, and her general health was very much impaired by loss of blood and other discharges which she had during her pregnancy.

SUCCESSFUL CASES.—The tabulated record contains four cases of recovery after the Cæsarean section. In one case, enumerated as one of success, I can only state what has been given to the profession. It is registered (91) in the tables; and the report made by the operator only extends to forty-eight hours after the operation, when it is stated that she was doing well. Further information I have been unable to obtain. In Case 89, the cause of impediment to the passage of the infant through the pelvis was epithelioma of the cervix uteri. Dr. Greenhalgh operated before labour had commenced, and before the membranes had ruptured; and doubtless we are indebted to this gentleman for its suc-

* In one case (82), there is no account whether the infant was living or dead; if living, which is most likely, the number saved would stand 14, or 73.68 per cent.

cess by adopting an early operation, and for its judicious treatment afterwards. The case merits attentive perusal and deep consideration. Ether-spray was used. In Case 88, the impediment to labour arose, again, from extensive epithelioma of the cervix and lower part of the body of the uterus. The labour in this case had commenced prematurely at six months and a half. Ether-spray was used. Mr. Newman's judicious and firm treatment of the case merits the approbation of the profession. The recoveries of these two women, labouring under malignant disease, and having undergone such serious operations, are truly wonderful, and afford the strongest evidence of the conservative powers of nature. These cases ought to teach us to have more confidence as to the result of this operation; and they afford contradictory proof against the assertion of those practitioners who despair of success, and look upon the reductive changes of the puerperal uterus as antagonistic to recovery. The other case of recovery (96) is most interesting and satisfactory. The pelvic obstruction was caused by exostosis springing from the sacrum. (See Table.) The patient was in good health; and the operation was early and judiciously performed by Mr. I. B. Brown, with the concurrence and assistance of Dr. John Taylor, whose patient she was, before the constitutional and local vital powers had suffered from pressure, etc. The membranes had not ruptured. There are many important practical points which Dr. John Taylor communicated to me, some of which have already been used, as the location of the placenta, the hæmorrhage which issued from the uterine veins and walls. There are other matters which shall be spoken of under their respective heads.

(To be concluded.)

THERAPEUTICAL MEMORANDA.

NEURALGIA IN THE BOWELS CURED BY DR. LEARED'S METHOD OF TREATMENT.

By WILLIAM NORRIS, M.D., Stourbridge.

FOR twenty years I have frequently suffered from tic in the face, and a chronic pain in the central bowels, continuing some hours without disorder of any function, except occasional flatulency, and yet it does not appear to have affected my health in any way, for at my age I am unusually healthy and active, with a flushed countenance, free from any tinge on the skin betokening organic disease. Some writers think neuralgia does not affect the health, and this appears in part proved by my case.

I read some excellent remarks on gastrodynia in the BRITISH MEDICAL JOURNAL a few weeks ago, which induced me to believe that I had been long suffering from neuralgia in the bowels; in fact, I sometimes thought so, and had now and then found relief by taking arsenic and applying chloroform, but I never gave either of them a fair trial, and have of late trusted to a small dose of laudanum, or one cigar, and the pain has usually faded away. The pain has generally come on two or three hours after dinner; and I at first attributed it to drinking water from a leaden pump many years ago; and, as I and some of my family have been subject to tic in the face, it is quite fair to infer that I have been long suffering from neuralgia in the bowels, and, what makes it still more probable, for the last few weeks I have had very little pain in the face and much more pain in the bowels, till I began to take arsenic, as recommended by Dr. Leared, and now for some weeks I have scarcely had any suffering in the bowels, and I think I shall soon be free from complaint. I ought to remark that my abdominal pain generally came on during digestion; and it is probable that other persons subject to neuralgia would have it in an organ or structure predisposed to it when in a greater state of excitement. I took about five drachms of liquor arsenicalis, in doses of five or six drops twice a day. In less than a week, the pain began to diminish, and then gradually left me.

I feel much obliged to Dr. Leared for his valuable and interesting remarks; and I trust and hope the remedy will be fairly tried, and that hundreds of others will obtain the same relief that I have done.

It will probably give the remedy a fairer chance, if the digestive organs are at the same time carefully regulated; and should slight diarrhoea come on after taking it for a few weeks, a few drops of laudanum may be conjoined with each dose, and a light nutritious diet should be taken.

P.S.—In the year 1851, I wrote a paper in the *Lancet* on Chronic Colica Pictorum, and recommended a small portion of lint to be dipped in chloroform and applied to the abdomen. I have used it with great success in sciatica, in neuralgia of the face, and I think it would be useful in the disease here described.

ABSTRACT OF A CLINICAL LECTURE ON PYÆMIA AS A RESULT OF ENDOCARDITIS.

By SAMUEL WILKS, M.D.,
Physician to Guy's Hospital.

THE following is an abstract of a very full report of the case taken by Mr. J. R. Stocker.

Alfred F., aged 25, was admitted on Jan. 1st, 1868, for heart-disease. He stated that he had rheumatic fever in 1851; and that the doctor then informed him that his heart was affected, but he had had no symptoms referable to it until four months ago. He then became very ill, with shortness of breath, palpitation, etc., followed by some swelling and pains of the joints. On admission, he was seen to be very ill, having sallow countenance, and suffering great distress from shortness of breath and palpitation. The heart was most irregular and rapid in its action, with a loud systolic murmur, heard loudest over the apex. The urine had a good specific gravity, and was slightly albuminous. The legs were somewhat cedematous. He was ordered a saline mixture, with a pill of digitalis, squill, and mercury.

In four days he was much better; the breathing being less oppressed, and heart's action checked. He was then ordered to take ferrum tartaratum.

On January 14th, he suddenly felt giddy, and afterwards had intense headache.

On the 24th, there was an aggravation of the original symptoms, and great irregularity of the heart's action, with dyspnoea.

On the 31st, he found his right arm and leg very weak and numb. After four days, this weakness had increased; and at the same time there was some hesitation in his speech and forgetfulness of words. He had also pain and swelling of the joints.

On February 14th, he lay in a most precarious state. There was great irregularity of the heart's action. He had complete right hemiplegia, with partial aphasia; that is, a forgetfulness of many words. Thus, being told the name of a key, he would use the word "key" for every other object presented to him; and being shewn his grapes, and various names for them suggested to him, and amongst them the correct appellation, he would not assent to any of them. He could read certain words on his bed-card, but not others. He thus continued in a barely living condition until March 1st, when he died.

POST MORTEM EXAMINATION.—The left middle cerebral artery was plugged, and a large part of the left hemisphere disorganised by an abscess; the pus being green and thick. The lungs were in a state of splenisation. The heart shewed the mitral valve much diseased, the columns and cords covered with vegetations and shreds of fibrine. The liver contained throughout minute points of pus. The spleen had several fibrinous masses which were softening, and some were purulent—in deed, were distinct abscesses. The kidneys contained fibrinous masses not softening.

I bring this case before your notice, because it is the most marked which I have ever seen of the pyæmic process in connection with endocarditis. This disease is one of great interest pathologically, but has scarcely received a full recognition at the bedside of the patient. Although isolated cases of the disease may be found scattered through the journals, it has never been systematically treated of in the text-books of medicine. You know that, by the term pyæmia, we generally understand that form of disease in which the blood is infected by some purulent or kindred fluids; and that certain marked symptoms result, with a tendency to abscess in various parts of the body. The source of the infection is to be found on the surface of the body, and the deleterious matter is taken up into the veins. But now I have to tell you (in a clinical lecture, as I have been doing for many years past in the pathological lectures), that the arterial blood may be in a like manner primarily infected at the very centre of the circulation. Just as, in ordinary pyæmia, the poisoned blood travels from the circumference to the centre, so here the converse process is in operation, the seat of the infection being the heart itself.

I should tell you that it has long been known that fibrinous masses have been found in the kidneys and spleen of those who have died of cardiac disease, and various theories have been mooted in explanation of their origin; the term capillary phlebitis having been much used of late years, after Rokitsky. We are indebted, however, more especially to the late much to be lamented Dr. Kirkes for unravelling this subject in a most masterly manner. If you refer to his paper, you will find that he had discovered the fact that, if particles of fibrine or vegeta-